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IDEA-3097-66

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12 April 1966

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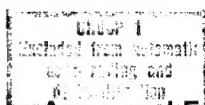
MEMORANDUM FOR THE RECORD

SUBJECT : Characteristics of IDEALIST Camera Systems

1. Nycon "B" cameras will be replaced during 1966 with light weight versions of the same cameras having improved performance characteristics. Two of these have been delivered and flight tested, the four remaining will be delivered at a rate of one per month.
2. Itek Delta III cameras have been used in the past against specialized targets where high resolution was essential. Agency assets include three of these cameras, one of which is on loan to OL-20.
3. The Nycon H camera, designed for target acquisition at distances up to 30 miles, is currently in flight test status at Detachment G. Pilotage techniques for locating and covering targets will be worked out before committing it to operational use.
4. A proposal has been received from Itek for a so-called Optical Bar Panoramic camera that combines convergent stereo, large scale, high resolution, wide swath, and range with light weight in a suitable compromise.
5. The Eastman Type II camera can be installed in the IDEALIST vehicle if the stable platform is removed and revisions are made to the image motion compensation circuitry. It is expected that performance would be about equivalent to that of the improved B camera, however since there are only two of these cameras in existence, it is questionable whether technical representative support would be worth the effort.

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6. The attached numerical summary of the above noted IDEALIST Camera Systems lists the principle operational characteristics that affect intelligence gathering ability. Since any reconnaissance system is a compromise directed toward doing several jobs as well as possible, a comparative analysis should not give undue emphasis to one characteristic over another. Each of the five systems were rated on a scale of 1 to 5 (5 being the best) against the eight parameters that contribute to a desirable system. While the ratings shown may be adjusted somewhat by judgment factors, it seems apparent that the light weight B cameras and the Delta III will continue to provide the IDEALIST reconnaissance capability, with special support as required from the H camera.

7. Other sensors such as the tracker and [redacted] which are considered secondary to the primary mission, have been omitted from this summary.

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SSD/OSA

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Attachment: As Stated

C/SSD/OSA/[redacted] (12 April 1966)

Distribution:

- Cy 1 - SSD/OSA (all cys w/att)**
- 2 - D/TECH/OSA**
- 3 - D/FA/OSA**
- 4 - IDEA/OSA**
- 5 - INTEL/OSA**
- 6 - SA(Sci)D/TECH/OSA**
- 7 - chrono**
- 8 - RB/OSA**

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Att. to
IDEA-3097-66

PARAMETER	B CAMERA	DELTA III	H CAMERA	OPTICAL BAR	TYPE II
Lens Focal Length/ Aperture	36" f/10 (f8)	24" f/3.5	66" f/5.0	40" f/4.0	21" f/4.0
Scale Vertical 70,000 Altitude	1/23,400 ³	1/35,000 ²	1/12,720 ⁵	1/21,000 ⁴	1/40,000 ¹
Ground Resolution Vertical	20" ²	11" ³	6" ⁵	9" ⁴	20" ²
Weight With Film	354 lbs. ⁵	470 lbs. ¹	536 lbs. (450) ²	387 lbs. ⁴	417 lbs. ³
Swath Width	Horizon to Horizon ⁵	16.5 N.M. ²	11 N.M. at 60° 1.4 N.M. at Vertical ¹	50 N.M. ⁴	46 N.M. ³
Coverage Flight Direction	2062 to 3440 Depending on Mode ⁵	2900 N.M. ³	280 - 1673 Depending on Mode ¹	1530 N.M. ²	3050 N.M. ⁴
Stereo	Overlap ²	Convergent 26° ⁵	Overlap ²	Convergent 20° ⁴	Convergent 17° ³
Selectable Mode 3	Yes ⁵	No ²	Yes ⁴	Mono or Stereo ³	No ²
Availability	Current ⁵	Current ⁴	1966 1967 ²	1968 ¹	1966 ³
Rating	32	22	22	26	21

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